



COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
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GAIL FARBER, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

April 19, 2011

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

ADOPTED

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

#41 APRIL 19, 2011

Sachi A. Hamai
SACHI A. HAMAI
EXECUTIVE OFFICER

Dear Supervisors:

**WEST COAST BASIN BARRIER PROJECT
FOLLOW-UP CONDITION ASSESSMENT
COOPERATIVE AGREEMENT
(SUPERVISORIAL DISTRICT 4)
(3 VOTES)**

SUBJECT

This action is to enter into a cooperative agreement with the West Basin Municipal Water District and the Water Replenishment District of Southern California to perform a follow-up condition assessment of the West Coast Basin Barrier Project.

IT IS RECOMMENDED THAT YOUR BOARD ACTING AS THE GOVERNING BODY OF THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT:

1. Find that entering into this cooperative agreement is exempt from the provisions of the California Environmental Quality Act.
2. Authorize the Chief Engineer of the Los Angeles County Flood Control District or her designee to enter into a cooperative agreement with the West Basin Municipal Water District and the Water Replenishment District of Southern California to perform a follow-up condition assessment of the West Coast Basin Barrier Project. The total cost of the project is estimated to be \$200,400 and will be financed with the Fiscal Year 2010-11 Flood Control District Fund Budget. Under this cooperative agreement, the West Basin Municipal Water District and the Water Replenishment District of Southern California will each reimburse the Los Angeles County Flood Control District for one-third of the cost to perform the study, up to \$66,800 each.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

The purpose of the recommended actions is to perform a follow-up condition assessment on a 2,400 foot segment of the West Coast Basin Barrier Project (WCBBP) water supply pipeline. The assessment will include an in-depth evaluation of the structural condition of the pipeline, and recommend repairs, improvements, and measures to prevent future shutdowns in an effort to protect the underground water supply source from seawater intrusion. The County of Los Angeles Department of Public Works (Public Works) will return to your Board of Supervisors (Board) requesting approval to award the consultant services agreement for the condition assessment.

Implementation of Strategic Plan Goals

The Countywide Strategic Plan directs the provisions of Operational Effectiveness (Goal 1) and Community and Municipal Services (Goal 3). The recommended actions will help achieve these goals by maximizing the effectiveness of County infrastructure and ensuring the County's residents receive quality infrastructure services. The Los Angeles County Flood Control District (LACFCD) will receive reimbursement funding for two-thirds of the cost to perform the assessment, up to \$133,600.

FISCAL IMPACT/FINANCING

There will be no impact to the County General Fund.

The total cost of the condition assessment is estimated to be \$200,400 and will be financed with the Fiscal Year 2010-11 Flood Control District Fund Budget. Under this cooperative agreement, the West Basin Municipal Water District (WBMWD) and the Water Replenishment District of Southern California (WRD) will each reimburse LACFCD for one-third of the cost to perform the assessment, up to \$66,800 each.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

LACFCD is the lead agency for the follow-up condition assessment and will be reimbursed one-third of the cost to perform the assessment from each participating agency. A cooperative agreement substantially similar to the cooperative agreement enclosed as Exhibit A, which has been approved as to form by County Counsel, will be used to collect funds from the WBMWD and the WRD. LACFCD owns and operates the WCBBP which consists of injection wells, observation wells, water supply lines, pressure-reduction facilities, and related appurtenances for the purpose of injecting water. Freshwater and recycled water is injected into the underlying aquifers to develop a pressure ridge that prevents seawater from intruding into and degrading the underground source of potable water supply. Based on the results of a previous condition assessment completed in 2009, the LACFCD seek to perform a follow-up condition assessment on a 2,400 foot segment of the water supply pipeline through a consultant services agreement. Public Works will return to your Board requesting approval to award the consultant services agreement.

ENVIRONMENTAL DOCUMENTATION

Entering into the cooperative agreement for the follow-up condition assessment is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15262 of the CEQA guidelines. This exemption provides for feasibility or planning studies for possible future actions, which have not been approved, adopted, or funded.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

The follow-up condition assessment will evaluate a 2,400 foot segment of the WCBBP water supply pipeline and recommend repairs and improvements to LACFCD's infrastructure to protect our groundwater supply from seawater intrusion.

CONCLUSION

Please return one adopted copy of this letter to the Department of Public Works, Water Resources Division.

Respectfully submitted,

A handwritten signature in black ink that reads "Gail Farber". The signature is written in a cursive, flowing style.

GAIL FARBER
Director

GF:CS:abc

Enclosures

c: Chief Executive Office (Rita Robinson)
County Counsel
Executive Office

EXHIBIT A

Agreement No. W_____
to Jointly Fund a
Follow-up Condition Assessment of
the West Coast Basin Barrier Project
Between
Water Replenishment District of Southern California,
West Basin Municipal Water District,
and
Los Angeles County Flood Control District

THIS AGREEMENT, made and entered into by and between the Water Replenishment District of Southern California (WRD), West Basin Municipal Water District (WBMWD), and Los Angeles County Flood Control District (LACFCD) (collectively referred to as "Parties" or individually as "Party").

WHEREAS, the County of Los Angeles is home to approximately 10 million residents who depend on reliable sources of water; and

WHEREAS, approximately two-thirds of the water supply is imported from sources outside of the region; and

WHEREAS, in addition to imported water, the water supply also depends on groundwater that is recharged from a variety of sources, including injection at the West Coast Basin Barrier Project (WCBBP); and

WHEREAS, LACFCD is a special district organized and operating under the County of Los Angeles Flood Control Act, Water Code Unified Acts, Act 4463 (hereinafter referred to as Flood Control Act); and

WHEREAS, pursuant to the Flood Control Act, the LACFCD is authorized to manage flood control and water conservation facilities within its boundaries, and said efforts include injection of water at the WCBBP to recharge the groundwater basins within the County of Los Angeles, including the subterranean regional aquifer known as the West Coast Groundwater Basin (West Coast Basin); and

WHEREAS, LACFCD owns and operates the WCBBP which consists of injection wells, observation wells, water supply lines, pressure-reduction facilities, and related appurtenances for the purpose of injecting water; including to aid in the replenishment of the water supply of the West Coast Basin, and to form a hydraulic barrier to prevent seawater from intruding into the West Coast Basin; and

WHEREAS, WRD is a special district created pursuant to California Water Code, Section 60000, *et seq.*, adopted by the California legislature in 1955; and

WHEREAS, WRD has operated since 1959 to protect and preserve the quantity and quality of the groundwater supplies in the Central and West Coast groundwater basins, which basins serve as the source of nearly 40 percent of the water used by the 4 million people overlying the WRD's 420-square-mile service area; and

WHEREAS, WRD's mission includes managing and safeguarding the groundwater resources of the West Coast Basin by ensuring its water quality and by maximizing the amount of groundwater in the basins; and

WHEREAS, WBMWD was established for the purpose of, among other things, water conservation and ensuring a reliable supply of potable water for the region; and

WHEREAS, WBMWD supplies, WRD purchases, and LACFCD conveys and injects the water into the WCBBP; and

WHEREAS, WBMWD and WRD benefit from the efforts of LACFCD to inject water at the WCBBP to replenish the water supply of the West Coast Basin and prevent seawater from intruding into the West Coast Basin; and

WHEREAS, on April 2, 2008, WRD, WBMWD, and LACFCD entered into an agreement (i.e., agreement number W1951) to jointly fund a condition assessment of the WCBBP to determine if improvements were required to prevent future shutdowns of the WCBBP and to maintain protective groundwater elevations with a high level of efficiency; and

WHEREAS, the recommendations included in the WCBBP Condition Assessment Final Report revealed the need to perform a follow-up condition assessment on certain portions of the water supply line, specifically that portion located on the Raytheon property near the intersection of El Segundo Boulevard and Nash Street in the City of El Segundo; and

WHEREAS, LACFCD, WRD, and WBMWD desire to perform a follow-up condition assessment as recommended by the WCBBP Condition assessment Final Report.

WHEREAS, LACFCD will retain a consultant to perform the follow-up condition assessment which work will be funded jointly by LACFCD, WRD, and WBMWD.

NOW, THEREFORE, in consideration of the mutual benefits to be derived by WRD, WBMWD, and LACFCD, and of the premises herein contained, it is hereby agreed by the Parties as follows:

SECTION 1 – SCOPE OF WORK

A Scope of Work to perform a follow-up condition assessment on a portion of the WCBBP water supply facilities, together with its deliverables (Scope of Work), as developed jointly by WRD, WBMWD, and LACFCD, is attached hereto as Exhibit A and incorporated herein by this reference.

SECTION 2 – REQUEST FOR PROPOSALS/CONSULTANT SELECTION

LACFCD shall have the authority to hire a third-party consultant ("Consultant") to perform the Scope of Work by means of procurement procedures that satisfy the LACFCD's normal procurement and contract process. At the time of the selection of the Consultant to perform the Scope of Work under this AGREEMENT, LACFCD shall include WRD and WBMWD on the proposal selection committee. The selected Consultant shall be awarded a contract to perform the Scope of Work.

SECTION 3 – PAYMENTS

WRD and WBMWD shall each be responsible to reimburse LACFCD for Consultant services in the amount not to exceed Sixty-six Thousand Eight Hundred Dollars (\$66,800) or one-third of the total amount invoiced by the Consultant, whichever is less. LACFCD shall invoice WRD and WBMWD monthly based on invoices it receives from the Consultant. LACFCD shall be responsible for all costs of the Scope of Work in excess of said contributions by WRD and WBMWD. WRD and WBMWD will not reimburse LACFCD for any additional costs to perform or complete the Scope of Work except pursuant to a written amendment to this Agreement.

SECTION 4 – REPORT OF FINDINGS

LACFCD shall provide both WRD and WBMWD with one copy each of the draft report of findings submitted by the Consultant. Comments from WRD and WBMWD on the draft report of findings must be submitted to LACFCD within fourteen (14) days of LACFCD providing the draft report of findings to be considered for incorporation into the Final Comprehensive Report of Findings. LACFCD shall also provide both WRD and WBMWD with one hard copy and one electronic copy each of the Final Comprehensive Report of Findings.

SECTION 5 – NOTICES

Notices required or permitted shall be given by personal delivery or by first class mail, postage prepaid, or facsimile transmission to:

Water Replenishment District of Southern California
Attention General Manager
4040 Paramount Boulevard
Lakewood, CA 90712

West Basin Municipal Water District
Attention General Manager
17140 South Avalon Boulevard
Carson, CA 90746

LACFCD
County of Los Angeles Department of Public Works
Attention Assistant Deputy Director – Water Resources Division
900 South Fremont Avenue, 2nd Floor
Alhambra, CA 91803-1331

SECTION 6 – INDEMNIFICATION

- a. WRD shall hold harmless, defend at its own expense, and indemnify LACFCD and WBMWD, its officers, employees, representatives and agents against any and all liability, claims, losses, damages, or expenses arising from the negligence or willful misconduct of WRD or its officers, employees, representatives or agents in rendering services under this AGREEMENT; excluding, however, such liability, claims, losses, damages, or expenses arising solely from the respective negligent or willful acts of LACFCD or WBMWD, its officers, employees, representatives and agents.
- b. WBMWD shall hold harmless, defend at its own expense, and indemnify LACFCD and WRD, its officers, employees, representatives and agents against any and all liability, claims, losses, damages, or expenses arising from the negligence or willful misconduct of WBMWD or its officers, employees, representatives or agents in rendering services under this AGREEMENT; excluding, however, such liability, claims, losses, damages, or expenses arising solely from the respective negligent or willful acts of LACFCD or WRD, its officers, employees, representatives and agents.
- c. LACFCD shall hold harmless, defend at its own expense, and indemnify WBMWD and WRD, its officers, employees, representatives and agents against any and all liability, claims, losses, damages, or expenses arising from the negligence or willful misconduct of LACFCD or its officers, employees, representatives or agents in rendering services under this AGREEMENT;

excluding, however, such liability, claims, losses, damages, or expenses arising solely from the respective negligent or willful acts of WBMWD or WRD, its officers, employees, representatives and agents.

SECTION 7 – ASSIGNMENT

No one party to this AGREEMENT shall assign, sell, or otherwise transfer any obligation or interest conferred in this AGREEMENT without the specific written consent of the other Parties to this AGREEMENT.

SECTION 8 – APPLICABLE LAW

This AGREEMENT shall be construed in accordance with and governed by the laws of the State of California and action brought relating to this AGREEMENT shall be brought solely in a court of competent jurisdiction in the County of Los Angeles, California.

SECTION 9 – INTEGRATION

This AGREEMENT represents the entire understanding of the parties. No prior oral or written understanding shall be of any force or effect with respect to those matters covered by this AGREEMENT.

SECTION 10 – SEVERABILITY

In the event that any provision herein is held to be invalid by any court of competent jurisdiction, the invalidity of any such provision shall not affect the validity of the remaining provisions of this AGREEMENT, which shall remain in full force and effect.

IN WITNESS WHEREOF, the parties thereto have caused this agreement to be executed by their duly authorized representatives.

Date: _____

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

By: _____
Chief Engineer

APPROVED AS TO FORM:

ANDREA SHERIDAN ORDIN
County Counsel

By: _____
Deputy

IN WITNESS WHEREOF, the parties thereto have caused this agreement to be executed by their duly authorized representatives.

Date: _____

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

Signature

Signature

Print Name

Print Name

President, Board of Directors
Title

Secretary, Board of Directors
Title

APPROVED AS TO FORM
ALSTON + BIRD LLP

By: _____
Edward J. Casey
Attorneys for the Water Replenishment
District of Southern California

IN WITNESS WHEREOF, the parties thereto have caused this agreement to be executed by their duly authorized representatives.

Date: _____

WEST BASIN MUNICIPAL WATER DISTRICT

By: _____
Richard Nagel, General Manager

APPROVED AS TO FORM:

By: _____
Lemieux & O'Neill, District Counsel

EB:

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**CONSULTANT SERVICES TO
PERFORM A FOLLOW-UP CONDITION ASSESSMENT OF
THE WEST COAST BASIN BARRIER PROJECT**

1. OBJECTIVE AND INTRODUCTION

1.1 Objective

To perform a follow-up condition assessment on a 2,400 foot segment of the West Coast Basin Barrier Project (WCBBP) water supply pipeline. The assessment is to include a nondestructive electromagnetic inspection of the existing steel concrete cylinder pipe (i.e., bar wrap pipe), and the results are to be utilized to further understand the current structural condition of the targeted pipeline segment. In addition, a failure risk analysis is to be performed utilizing the results of the electromagnetic inspection to identify the possible need for pipeline repairs and/or replacement.

1.2 Introduction

The seawater intrusion barriers were started in the early 1950s as an experimental project in response to an overdraft caused by excessive groundwater pumping for a rapidly growing population. The design, construction, and operation of the barriers have been a significant accomplishment in mitigating seawater intrusion into critical coastal aquifers, which serve as an invaluable water source for Southern California residents. Several local water agencies work together to support seawater barrier injection and monitoring operations.

The seawater barriers protect an estimated 32,000,000 acre-foot groundwater reservoir from contamination by seawater intrusion. Two million residents of the Southern California Coastal Plain depend on this groundwater that provides approximately 40 percent of their potable water supply. Besides being the lowest cost water available, this groundwater reservoir serves as a strategic reserve when imported water supplies are interrupted due to drought or disaster.

1.3 Background

The County of Los Angeles Department of Public Works (Public Works) currently operates three seawater intrusion barriers to prevent seawater from contaminating the groundwater by injecting freshwater to form a protective pressure ridge. The three barriers are the Alamitos Barrier Project (ABP), the Dominguez Gap Barrier Project (DGBP), and the WCBBP.

The WCBBP, which is the largest of the three barriers, is aligned in a north-south direction, and is split into two main segments (i.e., El Segundo Leg [northerly] and Redondo Leg [southerly], see Exhibit A). It includes 153 injection wells operating continuously at flow rates ranging from 0.05 to 1.5 cubic feet per second (cfs). The total flow rate for the entire WCBBP ranges from 18 to 30 cfs.

In March 2003, Corrpro Companies Inc., completed a detailed condition assessment of the water supply pipelines, valves, and appurtenances for all three Public Works seawater barriers. Corrpro provided Public Works with an evaluation report which presented their findings and included a list of seawater barrier improvement projects, which were prioritized based on the criticalness of the repair.

In January 2006, a pressure reduction valve controlling flow to the WCBBP malfunctioned and created a pressure surge which propagated throughout the entire WCBBP. The pressure surge created detectable leaks in the supply line at two locations within the El Segundo Leg.

In April 2008, Public Works partnered with the West Basin Municipal Water District and the Water Replenishment District to perform another condition assessment of the WCBBP water supply pipelines. The goal of this project was to determine if the pressure reduction valve malfunction in 2006 caused any additional leaks in the system, and to evaluate the overall condition of the water supply pipelines. CH2M Hill was selected as the consultant to perform the condition assessment, and their findings indicated no additional leaks were present in the system. However, their report did recommend performing a follow-up condition assessment involving a nondestructive electromagnetic inspection of certain segments of the water supply pipeline. One of the segments identified was a 2,400 foot segment of 45-inch steel concrete cylinder pipe (i.e., bar wrap pipe) located below the elevated Metro Green Line in the City of El Segundo (see Exhibit B). The focus of this project is to perform a follow-up condition assessment to get a more detailed look at the structural integrity of the 2,400 foot segment of pipeline as recommended by CH2M Hill in their WCBBP Condition Assessment, Final Report (an electronic copy of the Final Report is included on a CD as Exhibit C).

2. SCOPE OF WORK

This scope of work is provided as a guide to achieve the objective stated in Section 1.1. The consultant shall obtain, review, organize, and incorporate any information pertinent to the study and design. The services to be performed by the consultant shall include, but not necessarily be limited to, the following items of work outlined below. The consultant should recommend work items not listed, or any changes, if they are believed to better suit the objective.

2.1 Gather Background Information

2.1.1 Review the WCBPP Condition Assessment, Final Report, July 2009.

2.1.2 Review the pertinent as-built plans for the WCBBP water supply pipeline.

2.2 Fill Significant Data Gaps

2.2.1 Review information gaps with Public Works staff.

2.2.2 Conduct field work to resolve key data gaps.

A. Identify access points to insert and retrieve electromagnetic inspection equipment from the water supply line.

B. Perform a visual survey of the site to evaluate field conditions.

2.3 Conduct Field Investigation

2.3.1 Based on the results of 2.1 and 2.2, propose a method to perform a nondestructive electromagnetic inspection continuously along the entire length of the targeted 2,400-foot section of the WCBBP water supply pipeline. The electromagnetic inspection must occur from within the pipeline while it is pressurized and in operation. In addition, information must be provided on the capabilities and limitations of the proposed method of electromagnetic inspection.

2.3.2 Upon Public Works' approval, evaluate the condition of the targeted section of the pipeline utilizing the method proposed in 2.3.1. Consultant shall coordinate evaluation activities with Public Works representatives, be fully responsible for securing any necessary or required permits, and perform complete restoration of any facilities following the evaluation activities.

2.4 Evaluate Physical Integrity of the Pipeline

2.4.1 Based on the results of 2.3, provide quantitative information on the remaining thickness of the steel cylinder and the condition of the reinforcement bars for the entire length of the 2,400-foot section of pipe.

2.4.2 Based on the results of 2.4.1, evaluate the current structural integrity of the pipeline. Also, evaluate the current load bearing capacity of the pipeline. If the pipeline is at risk of imminent failure, the selected consultant shall notify Public Works immediately.

2.5 Perform a Failure Risk Analysis

- 2.5.1 Based on the results of 2.4, perform a failure risk analysis to determine the probability and risk of failure. Identify if the risk is within acceptable engineering limits.
- 2.5.2 Provide a recommendation as to whether or not the pipeline should continue to operate in its current condition. If the pipeline should not continue to operate, provide a recommendation to make repairs, or to replace the pipeline segment. Recommendation for repairs should specify the method/process for making the repairs.
- 2.5.3 Provide a cost estimate to make any recommended repairs, or to replace the segment of pipe.

2.6 Prepare Draft and Final Reports

- 2.6.1 Prepare and submit a draft report of the findings of 2.1 through 2.5 that describes the data gathered, analysis performed, and present recommendations for repairs or replacement. An electronic copy of the draft report in Microsoft Word and Adobe pdf format, and three (3) hard copies of the report shall be submitted for review and comment.
- 2.6.2 Prepare and submit a Comprehensive Final Report of Findings. All comments provided on the draft report shall be addressed or incorporated into the Comprehensive Final Report of Findings. The consultant shall submit six (6) hard copies (five bound, one unbound) and two (2) electronic copies on CD-ROM in Microsoft Word and Adobe pdf format.

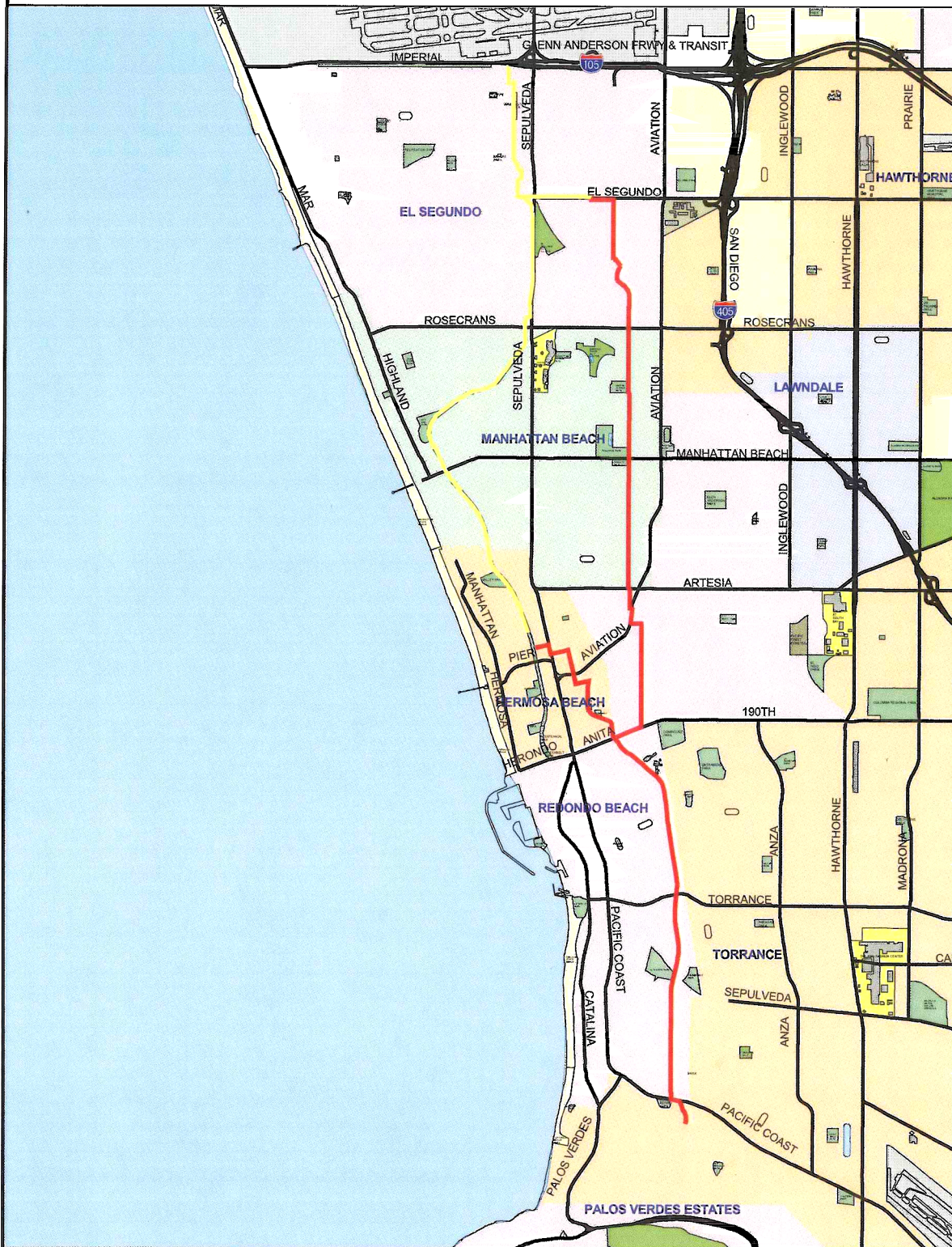
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West Coast Basin Barrier Project Follow-up Condition Assessment

Location of Water Supply Lines



0.75 0 0.75 1.5 Miles

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LEGEND

- Water Supply Line (El Segundo Leg)
- Water Supply Line (Redondo Leg)

Exhibit A

